Sulzer enabling carbon capture at world's first large-scale fossil-fueled power plant to use Carbon Capture and Storage technology

29 August 2024

Sulzer mass transfer equipment is capturing hundreds of thousands of tonnes of carbon dioxide (CO_2) emissions per year at SaskPower's coal-fired Boundary Dam Power Station plant in Canada. The equipment is used to separate the CO_2 from the other flue gases, enabling the majority of the CO_2 emissions to be captured. The captured CO_2 is used in part to support enhanced oil recovery (EOR) at local oil fields, improving circular practices. What is not used for EOR is permanently sequestered.

As the world's first large-scale carbon capture operation, the coal-fueled power plant elected to use Sulzer's mass transfer components and rely on the company's extensive experience in capturing CO_2. Prior to implementing carbon capture technology, the conventional coal-fired power plant was emitting approximately 1.3 million tonnes of CO_2 each year. Today, the facility continues to generate enough electricity to power approximately 100'000 Canadian homes while significantly reducing overall emissions from the plant.

Beginning 2025, carbon capture at the Boundary Dam power plant will rely on Sulzer's cutting-edge technology, MellapakCC™ and MellaTech™, which has been developed to deliver maximum capture efficiency at the lowest specific pressure drop. This results in lower energy consumption, offering significant gains in overall performance. With the local cost of electricity at approximately 20 Canadian cents per kWh, a pressure drop

reduction of 10 mbar can save nearly CAD$ 500’000 annually for a 115 MW coal-fired power station.

Sulzer’s Executive Chairwoman Suzanne Thoma said: “As governments, industry and local communities around the world strive to reduce emissions, they are still challenged to meet the energy demands of their communities. Our solutions serve to bridge these competing requirements by reducing emissions, enabling recycling and circularity, and improving operational efficiency.”

Image captions:

Image 1: Sulzer mass transfer equipment is capturing hundreds of thousands of tonnes of CO_2 emissions per year at SaskPower's Boundary Dam plant.

Image 2: Carbon capture at the Boundary Dam power plant will rely on Sulzer's cutting-edge MellapakCC™ structured packing.

About Sulzer

Sulzer is a global leader in fluid engineering and chemical processing applications. We specialize in energy-efficient pumping, agitation, mixing, separation, purification, crystallization and polymerization technologies for fluids of all types. Our solutions enable carbon emission reductions, development of polymers from biological sources, recycling of plastic waste and textiles, and efficient power storage. Our customers benefit from our commitment to innovation, performance and quality through our responsive network of 160 world-class manufacturing facilities and service centers across the globe. Sulzer has been headquartered in Winterthur, Switzerland, since 1834. In 2023, our 13'130 employees delivered revenues of CHF 3.3 billion. Our shares are traded on the SIX Swiss Exchange (SIX: SUN). www.sulzer.com

The Chemtech division is the global market leader in innovative mass transfer, static mixing and polymer solutions for chemicals, petrochemicals, refining and LNG. We are steering the way in ecological solutions such as bio-based chemicals, polymers and fuels, recycling technologies for textiles and plastic as well as carbon capture and utilization/storage, contributing to a circular and sustainable economy. Our product offering ranges from process components to complete process plants and technology licensing.

Visit our LinkedIn channel at www.linkedin.com/showcase/sulzer-chemtech for exciting updates and more!

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